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III.—THE ORIGIN OF THE INDO-EUROPEAN NOMINAL STEM-SUFFIXES.

PART I.

In discussing the question of the origin of the I. E. stem-suffixes it is necessary to bear in mind two considerations: in the first place that it is a question of the origin of a whole system, a whole principle of expression, and not of individual suffixes. So far as the latter are concerned no one e. g. who believes in the origin of I. E. suffixes from separate words would deny that in historical as well as prehistoric times many a suffix arose by other methods. Nor could those who deny the principle of composition as the source of suffixation also deny the origin of every individual suffix in that way. In the second place, the fact that the whole I. E. suffixal system is of prehistoric origin makes the question as to how it arose one which depends largely and almost entirely on considerations of general probability based on the nature of the processes assumed and their similarity to processes actually occurring in the formation of historical suffixes and of the other linguistic material, on the continuity of the line of development assumed with the tendencies in historical times, and on the possibility of finding in sufficient number individual instances which can without violence be brought into harmony with the theory under consideration. If, therefore, any one brings forth a large number of unconvincing examples of a *possible* origin to substantiate his own theory, all we can say is that he has not proved his point, that we may doubt very much the explanation of the individual suffixes without being able to say that the unconvincing nature of such attempts will militate in favor of the opposite theory.

It is because of this reason that one cannot claim that the often extremely fantastic attempts of some scholars to find historical words in I. E. suffixes, and their failure to carry conviction with them, is really an objection against the theory of composition itself, and many a scholar who has no sym-

pathy with these attempts will yet believe in the idea which lies at their basis. On the other hand, one can claim that the absence of any considerable number of plausible examples takes away one of the main supports which have been advanced for such a theory, and that any other more in line with the general considerations mentioned above would hold the field, even if its application to the individual suffix would be no more convincing than of the theory of composition. I am referring to such hypotheses as that of Prellwitz BB. 22. 76 ff. concerning the origin of I. E. *-bho-*, which he considers as derived from the I. E. root *bhā* 'to shine', so that Gr. *ἐλαφος* 'deer' would have been originally 'having the appearance of a deer'. As Brugmann remarks, it is impossible actually to disprove such conjectures, and the line of development assumed certainly is a thinkable one, but its failure to carry conviction is due to the fact that there is nothing distinctive about the words in *-bhos* which would in itself point in that direction, the only argument adduced being that in certain words in which the suffix seems to have no tangible meaning we *may* assume such an origin. But precisely the same sort of procedure can be applied to any other word in any apparently meaningless suffix if the latter chances to have a consonant in common with a root or word of such vague and general meaning as 'appearance', 'nature', 'going', etc. Thus we might as well say the suffix *-es- -os-* contains the root of the verb 'to be', translating e. g. Skt. *tāpas* 'warmth' as 'the being warm' or 'having a warm nature'; or that *-ero-* was the root of Gr. *ῥιγνυμι* 'arise, move', so that Gr. *ἐλεύθερος* 'free' was 'of free movement' or 'of free spirit' (cf. *θυμός* 'anger, spirit': *θύω*); or *-ue- -uo-* might be derived from I. E. *uē* 'to weave', so that e. g. Lat. *fulvus* was 'of tawny web' and then generally 'of tawny appearance'. But if we would admit a larger number of such origins, we are at once confronted with the impossible situation of imputing to very primitive people the habit of using a very large number of abstract words and of habitually forming an extremely large number of new words by the tortuous paths of useless circumlocution. And finally, the possibility of analyzing in the above way the meaning of words with meaningless suffixes is by no means confined to cases where the suffix does show

some such resemblance to a word of general meaning, but is logically possible everywhere. As far as the mere idea is concerned, we might as well say that Skt. *ásta-kam* in I. E. *-ko-* was 'having the appearance of a home', and that *-dhēnu-kā* 'cow' was 'having the appearance of a cow', or that *bahu-lá-s* = *bahú-ṣ* 'abundant' was 'having an abundant nature', etc.

No more convincing are attempts to identify I. E. suffixes with words of a more concrete nature, since such identifications in every case presuppose that the original meaning of the suffix can be felt in only a very small per cent. of words thus formed, if not in only a single word. While such a spreading out of meaning might be possible here and there, we would hardly assume it on such a large scale as would be necessary if any larger number of I. E. suffixes arose in this way. Moreover, it is almost inconceivable that an ingenious mind could not in every instance find one word ending in a certain productive suffix that would allow forcing the meaning of its suffix into that of some similar word or root, and if the suffix happens to have a resemblance to two words, we can refer with equal probability to both. Let us take an instance that is by no means among the most fantastic, namely the attempt of Fay Cl. Phil. 6. 315 ff. to identify Lat. *-ēdon-* with *edere* 'to eat', e. g. in *ūrēdo* 'blast, blight' as 'an eating to burn' (*ūro*), or in *dulcēdo* 'sweetness' as 'sweet taste'. But if we consider the initial vowel of the suffix to be due to clipping from some stem, we have as much right to take the suffix as derived from the root *dō* 'give', and we can find a larger number of words into whose suffixes we can read the notion of giving, e. g. *rubēdo* might be 'the giving of redness', or *frigēdo* 'the giving, i. e. causing of cold' rather than simply 'cold', or *oscēdo* might be 'the giving of an inclination to yawn' instead of simply 'inclination to yawn'! Certainly not less convincing than the derivation of some of these words from 'eating' would be the analysis of Gr. *σπαδών* 'spasms' (with *-don-* instead of *-ēdon-*) from 'the giving or causing of spasms'. Turning our attention to other suffixes, who could disprove that I. E. *-uent-* was the Latin *ventus*¹ 'wind', e. g.

¹The short *ē* of *-uent-* as opposed to *ē* of the I. E. **uē-* 'to blow' is no more an objection than *o* in the suffix *-bho-* as opposed to *ā* in *-bhā-* 'to shine'.

in Gr. *ἡνεμόεις* 'windy', originally 'having wind-blasts', or why is *-uen-* not the same as the Skt. root *van* 'to love', e. g. in Skt. *sáhō-van-* 'powerful', i. e. 'loving power', or in Gr. *ἄπειρον* 'boundless', i. e. 'not loving an end'? The mere asking of such questions at once throws discredit on other similar analyses which at first sight seem more in the realms of probability.

If, then, the supposition that I. E. suffixes mainly arose by composition clearly cannot be proved by establishing such origin of a larger number of individual suffixes, the only other possible proof would be a demonstration of the proposition that most suffixes which either arose under our eyes in historical times, or at least those of whose origin we are certain, are the result of composition, and that therefore the same thing is likely to be true of the others. But in actual fact the number of suffixes which can with any degree of certainty be traced to actually existing words is extremely small, and almost exclusively consists of such as arose in the life of the individual languages when the suffixal system had been developed for many centuries, and when consequently the change of the final member of a compound to a suffix was facilitated by syncretism with already existing suffixes of more general meaning. Cf. e. g. Oertel and Morris Harvard Stud. Cl. Phil. 16. 72., Brugmann Gr. 2. 1². 7. The clearest cases are enumerated by Brugmann op. cit. 12 f., among which might be mentioned Germanic adjectives like O. H. G. *wīb-līh* 'womanly', originally 'having the body or appearance (*līh*) of a woman', or abstract nouns like O. H. G. *kind-heit* 'childhood', originally 'station or condition or character (*heit*) of a child', for which cf. Kluge Nom. Stammbild². 80 ff., 111 ff. But all such cases are exceedingly limited in number when we compare them with the almost innumerable examples of suffixes demonstrably originating in other ways even in historical times. Whenever we can control the formation of a suffix of definite semantic content, we almost always find that it is the product of 'wrong analysis' or abstraction, arising by feeling as a unity the final part of a finished word together with an already existing formative which usually has a vaguer meaning. Thus by combination of I. E. *-no-*¹ with various stem-

¹ Brugmann Gr. 2. 1². 254 ff.

finals arose *-sno-*, *-eno-*, *-ono-*, *-ino-*, *-tno-*, *-teno-*, *-ino-*, *-īno-*, *-eino-*, *-oino-*, *-uno-*, *-ūno-*, *-ō(u)no-*, *-āno-*, *-rno-*, *-esno-*, *-osno-*, *-asno-*, *-usno-*. In the very same way I. E. *-ko-*¹ gives rise to *-sko-*, *-iko-*, *-uko-*, *-īko-*, *-ūko-*, *-āko-*, *-ēko-*, *-ōko-*, *-isko-*. Turning our attention to examples in the history of single languages, we find the Gr. diminutive suffix *-ιον*² in the very same way giving rise to *-διον*, *-ιδιον*, *-υδιον*, *-αδιον*, *-υδριον*, *-ακιον*, *-ισκιον*, *-αλ(λ)ιον*, *-ελλιον*, *-υλλιον*, *-ῡνιον*, *-αριον*, *-υριον*, *-ασιον*, *-αφιον*, *-ιφιον*, *-ηφιον*, *-υφιον*. In Latin again the simple diminutive *-ulus*³ causes *-illus*, *-ellus*, *-cellus*, *-cillus*, *-culus*, *-iusculus*, *-iunculus*. In this way every other simple productive suffix also leads to an incredibly large number of derivative suffixes, so that all in all the few suffixes actually arising by composition are literally swamped in the large number of those arising by "clipping" or "false abstraction".

Applying the principle that the forces at work in causing the changes of language at the present time are the same as those causing the same linguistic phenomena to originate, we could conclude that composition played a very subordinate part in the development of the I. E. suffixal system, but on the whole it was due to the same process of wrong abstraction as gave rise to the suffixes originating in later stages of language. The objection which might be raised, that this clipping in every instance presupposes a suffixal nucleus at the end, does not have much force when we consider that at the most this would only mean that to begin with a suffixal vowel existed, or an inflectional ending; for if we see e. g. the suffix *-uko-* arising from the addition of *-ko-* to an *u*-stem, we can in turn assume that *-ko-* arose by adding the suffix *-o-* to a word ending in *k*, and that *-ti-* arose by wrongly analyzing a word ending in *t* plus the suffix *-i-*. In this way all suffixes except the simple vocalic⁴ suffixes like *-o-*, *-i-*, and *-u-* could be explained by the same forces that are actually at work in creating the historical suffixes, and as far as these are con-

¹ Brugmann op. cit. 473 ff.

² Petersen Greek Diminutives in *-ιον* 204 ff.

³ Stolz Hist. Gram. 574 ff.

⁴ Simple consonantal suffixes like *-t-*, *-g-*, *-k-*, or *-s-* are due either to the same forces that produce the simple vocalic suffixes, or else arise by the phonetic loss of a following vowel, e. g. *-t-* from *-to-*. Cf. Brugmann op. cit. 422.

cerned, the idea that they are or ever were independent words has already on other grounds been given up in favor of the theory that they were the last part of certain dissyllabic roots, having been abstracted from the latter either because these vowels disappeared by phonetic processes under certain circumstances, so that the form e. g. with an *-o-* would appear to have an additional formative element as opposed to the one without it, or because the vowel spread by congeneric attraction from one word to another, so that there arose exactly the same contrast between the form with and without the vowel. Cf. e. g. Hirt *Handbuch d. gr. Laut u. Formenl.*². 294, Brugmann *op. cit.* 148. The fact that these simple vocalic formatives show no tangible meaning from the very beginning would of course militate very strongly against assuming them to have been originally independent words, even if we could believe that some unstable single vowels ever were complete words. In this way, then, practically the whole I. E. suffixal system can be traced to one and the same origin which has played such an important part at all times, and this alone should make us give up the idea that composition was the important factor.

Equally unconvincing, however, is the theory of composition from a semantic point of view. A suffix arising from a word must have had a meaning that at one time was comparatively narrow and concrete, but gradually branched out more and more as its origin was forgotten. Now this is found to be actually true of those which we really know to have been separate words. Thus the above mentioned Germanic adjectival *-lika-* O. H. G. *-lih* necessarily first became a suffix expressing characteristic or similarity, and to this use it is confined in the Gothic—cf. e. g. *sama-leiks* ‘of the same nature, similar’; but in modern German it sometimes expresses appurtenance, e. g. in *die häusliche Einrichtung*, or in *der kaiserliche Palast*. It designates origin in *der nördliche Wind*, while in English a stereotyped case-form has become a suffix for forming adverbs, e. g. *quick-ly*, *glad-ly*, etc. Consequently we should expect that pre-historic suffixes that have had thousands of years of development behind them should also often show a widening of their sphere of meaning, or at least that those of the many meanings of each individual suffix which

are most concrete or vivid, should be demonstrably the oldest. But in actual fact the reverse is true. Wherever we find a suffix charged with as definite a meaning as a diminutive suffix we find that such a meaning is secondary to an original vague adjectival meaning: it developed from 'descended from', belonging to the category of 'being like'. Wherever we find a suffix as exponent of a minor concrete category to which an object belongs we find that this is plainly the result of congeneric attraction. When e. g. a formative is used in a number of names of animals or plants or parts of the body or diseases, it is found to be invariably true that such a group originated from one or a few words in which the suffix was either meaningless or had a very vague meaning, and that these pattern types caused other associated words to take the same suffix, so that the latter then became exponent of the category. Cf. Brugmann *op. cit.* 589 ff. In all such cases the vaguer meanings exist side by side to show the origin, e. g. the Skr. *-ka-* is not only a diminutive-deteriorative-hypocoristic suffix, but forms secondary adjectives and nouns with the meaning of similarity and appurtenance, etc. And Gr. *-φο-* I. E. *-bho-*, which was productive in names of animals like *ἐλαφος*, *κόραφος*, and *ἔριφος*, is found with vaguer functions in adjectives like *στέριφος* 'barren' and *ἄργυρος* 'shining white', and in abstract substantives like *κόλαφος* 'buffet' and *φλύγαρος* 'babbling'. See Sturtevant *Cl. Phil.* 6. 197 ff. Even those suffixes which on the whole seem to be confined to a definite usage nevertheless show traces of a time when their force was comparatively vague. To our minds the comparative suffixes certainly seem to have a definite well-circumscribed function, and yet every one of them has received the same by infusion of a part of the stem-meaning into the suffix in words in which the formatives originally had a very vague meaning. To take but one example, the comparative *-tero-*¹ still exists in other functions in Skt. *āṣvatarás* 'mule': *āṣva-s* 'horse', i. e. 'something only relatively a horse', similarly in Lat. *mātertera* 'aunt': *māter* 'mother'. Cf. also Gr. *ὄρεστρος* 'mountainous' and *θηλύτερος* 'female', in which the suffix could at the most have designated a contrast to opposites.

Without needlessly multiplying examples of these well-

¹ Brugmann *op. cit.* 324 ff.

known phenomena, the damaging effect on the theory of the compositional origin of suffixes becomes evident. The assumption that the most frequently used suffixes should in prehistoric times have all suffered an almost inconceivable attenuation of their meaning, though starting from the definite meaning of individual words, while at all times that we are able to control, these same suffixes gradually developed narrow and concrete uses from the vaguer and more general, presupposes that there were two periods in the history of language during which different forces were at work, a notion which, credible enough in Schleicher's day, certainly no one would subscribe to today. Moreover, since the whole assumption of compositional origin rests on the idea that this attenuation of meaning takes such a long time that those periods which have come under our observation are not sufficient in extent to follow up the individual suffixes, we can point to the fact that observed linguistic history has been easily long enough to show a large number of instances of the opposite process, and also, in case of the Germanic compositional suffixes, it has been long enough even for the process assumed by the compositionists wherever we know that suffixes really did originate from words.

If, however, anyone should admit the vaguer meanings of suffixes as being the original ones, and should nevertheless hold to the theory of composition, he would assume that such notions as action, quality, adjectival use, agency, collectivity, which are the ideas expressed by most of the oldest suffixes, were developed and received conscious expression in very great number at a very primitive time when discrimination had not yet attained great accuracy, that these primitive peoples felt the need of an extremely large number of words expressing these notions, and that the consciousness of them was so strong as to make it necessary to express the same by composition also in almost every concrete word, a situation plainly unthinkable when compared with the rarity of consciousness of them when actually speaking nowadays.

But how can this last mentioned difficulty be avoided under the assumption that suffixes were due to false abstraction? If these vaguer meanings were the original ones, would it not be just as bad for one theory as the other? I answer 'No' because it seems certain to me that these notions like action,

quality, etc. were in turn not present in the suffixes from the beginning, but they were due to a process of semantic evolution from perfectly meaningless suffixes.¹ To substantiate this proposition one can refer to the fact that most of the simplest formatives like *-o-*, *-i-*, *-u-*, *-io-*, *-uo-*, *-mo-*, *-no-*, *-ro-*, *-lo-*, *-to-*, *-ti-*, etc. were not exclusively used for the formation e. g. of verbal or adjectival abstract nouns or for agent nouns, or for concrete nouns or adjectives, but one and the same suffix formed words of all of such general groups. But if this is true, it is evident that we are in no way justified in assuming that these meanings were consciously connected with the suffixes; for logically any noun can be referred to these general categories, but that is no sign that it actually was referred to them when a suffix occurs in other apparent uses also. Thus I. E. *-mo-* occurs as a primary adjective suffix, e. g. in Gr. *θερμός* Lat. *formus* O. H. G. *warm* Engl. *warm*; it forms adjectives of characteristic, as Skt. *dyuma-s* 'bright, shining': *dyu-* 'brightness', Gr. *ἔτυμος* 'true, genuine': *ἐτε[ρ]ός*; adjectives of appurtenance in Av. *zantuma-* 'belonging to the district': *zantu* 'district'; it forms adjectival abstracts in Lith. *gražūmas* 'beauty': *gražūs* 'beautiful'; verbal abstracts in Skt. *gharmá-s* 'heat', *sárma-s* 'flow', Gr. *φλογμός* 'burning', *πταρμός* 'sneezing', Ir. *mām* 'service', Goth. *dōms* 'judgment', Lith. *užmas* 'roaring'; it forms agent nouns in Skt. *yudhmá-s* 'fighter, warrior', Gr. *ἄνεμος* 'blower, i. e. wind'; instrument nouns in Skt. *idhmá-s* 'fuel': *idh-* 'to burn', Gr. *φορμός* 'carrying basket': *φέρω*, O. H. G. *zoum* O. Icel. *taumr* 'bridle': Goth. *tiuhan* 'to draw'; collectives in Gr. *δρῦμός* 'oak-coppice': *δρῦς* 'oak', while Skt. *drumá-s* designates an individual tree, as in fact the same suffix *-mo-* forms concrete nouns of great variety in various languages without our being able in any way to arrive at a satisfactory classification. Cf. Skt. *sóma-s* Av. *haoma-* 'juice, soma': Skt. *sunōti* 'he presses', Skt. *tōkma-s* 'young shoot', Gr. *κορμός* 'block', *ὄλμος* 'mortar', *κάλαμος* 'reed', Lat. *culmus* O. H. G. *halm* 'stalk', O. Icel. *halmr* Lett. *salms* 'straw', Lat. *limus* O. H. G. *slīm* 'slime', O. Engl. *lám* 'clay', Lith. *vařmas* 'gnat', *jėszmas* 'spear'. Adding to this the use of *-mo-* in superlatives, which, as Brug-

¹Lindner Ai. Nominalbild. 21 calls attention to the fact that the primary suffixes were originally not differentiated in meaning.

mann Gr. 2. 1². 163 f. has shown, arose from ordinals like **septm-os*: **septm*, analyzed **sept-mos*, in the same way as according to our theory most of the I. E. suffixes originated, we may well say that *-mo-* has so many different meanings that by itself it meant nothing.¹

Just as *-mo-* was prevailingly a primary suffix, yet showed an extended secondary use, so on the contrary *-ko-* was chiefly secondary and nevertheless made quite a variety of primary formations also, and it will therefore be a good example to show the immense diversity in character of words formed by this type also. Thus it forms primary adjectives like Skt. *ṣuṣkā-s* Av. *huška-* 'dry': Skt. *ṣuṣyati*, Gr. *φαίκος* 'bright': *φαιός* 'dusky', O. H. G. *scelah* O. Engl. *sceolh* O. Icel. *skialgr* 'crooked, askance': Gr. *σκολιός* 'crooked', Lith. *at-stokas* 'distant': *stóti*; verbal abstracts in Skt. *ḥlōka-s* 'call, sound': *ḥrñōti* 'he hears', Lett. *spēks* 'power': *spēt* 'be able', O. Blg. *zvękъ* 'sound': *zvęnēti* 'to sound'; agent nouns in Lith. *žvėjókas* 'fisher': *žvėjóti*, *teriókas* 'destroyer': *terióti*; instrument nouns in Skt. *átka-s* Av. *aṭka-* 'dress' if: Ir. *ētim* 'I clothe', O. Bulg. *znakъ* 'sign': *znati* 'know'; place names in Skt. *dhāká-s* 'receptacle': *dádhāti* 'he places', O. H. G. *luog* 'hiding-place': Lat. *lateo*, Gr. *λήθω*; it seems to designate appurtenance e. g. in Skt. *mámaka-s* 'mine': Gen. *máma*, *hotraka-s* 'he who belongs to the *hōtrá-m* or sacrifice', i. e. 'priest', Gr. *μαντικός* 'belonging to the prophet': *μάντις*, Lat. *hosticus* 'belonging to an enemy': *hostis*; descent or origin in Skt. *síndhuka-s* 'descended from the Indus (*síndhu-s*)', *urvāruká-m* 'the fruit of the *urvāru-s* (a kind of gourd)', Gr. *φυσικός* 'coming from nature': *φύσις*; material in Skt. *sidhraka-s* 'made of *sidhra*-wood', Gr. *ὄστρακον* 'hard shell of testacea': **ostr-*, O. H. G. *trog* M. (O. Icel. *trog* N.) 'wooden vessel, trough' < **dru-ko-*: Skt. *dru-*; possession either of a quality or something material in Skt. *sūcīka-s* 'a certain insect with a sting': *sūcī* 'sting', *an-ásthaka-s* 'boneless' and Gr. *ὀστακός* 'crab': *asthán-* 'bone', Lat. *tussicus* 'afflicted with a cough': *tussis*, Goth. *stainahs* O. H. G. *steinag* 'stony': Goth. *staina-* 'stone', O. Icel. *kroptugr* 'powerful': **kraftu-* 'power'; characteristic or similarity in Skt. *chattraka-* 'mushroom': *chattra-m* 'parasol', Av. *spaka-* 'dog-like': *span-*

¹ Cf. Brugmann op. cit. 663 on secondary adjectives.

'dog', Gr. φυσικός 'natural' as well as 'coming from nature', Lat. *sicilicus* 'comma': *sīcilis* 'sickle', O. H. G. *snēwag* 'snowy': *snēwa-* 'snow', Lith. *pelėkas* 'mouse-gray': *pelė* 'mouse'. The notion of characteristic can also be read into the suffix in the numerous instances in which it forms substantives from adjectives, e. g. Skt. *pṛthuka-s* 'flattened grain': *pṛthú-ṣ* 'flat', Lith. *slapūkas* 'one who likes to hide himself': *slapūs* 'liking to hide one's self'; also when it forms adjectives from other adjectives without perceptible change of meaning, e. g. Skt. *tánuka-s* O. Blg. *tenəkə* 'thin': Skt. *tanú-ṣ* 'thin', which, like Brugmann op. cit. 504, one might consider as 'having a thin nature'. Similarly, e. g. Skt. *dūraká-s*=*dūrā-s* 'distant'. That, however, these two groups were actually felt in this way because it is *possible* to conceive them thus, is a point to be proved in view of the fact that the notion of similarity or characteristic is by no means so predominant among the examples where the suffix can be interpreted with certainty as to allow us to refer all doubtful examples to that usage. While therefore Brugmann is undoubtedly right in saying that these notions were characteristic of *-ko-* from I. E. times, it does not follow that the other uses were all to be derived from it, which is demonstrably true only of the diminutive-hypocoristic and deteriorative uses, of which we consequently mentioned no examples in spite of their I. E. origin; for, being secondary developments, they will shed no light on what the suffix ultimately was. On the other hand it should be mentioned that aside from the above categories it occurs in a large number of substantives which were equivalent to their primitives, e. g. Skt. *karkāṭaka-s*=*karkāṭa-s* 'crab', *āstaka-m*=*āsta-m* 'home', Lat. *muscus*=O. H. G. *mos* 'moss', O. H. G. *as-c* O. Icel. *askr* 'ash-tree'=Lith. *ū'sis* (with transfer to *i* declension). Adding to all of these the numerous instances in which *-ko-* forms words which cannot be classified at all, either because their suffix seems to carry with it a meaning that is altogether isolated, or because their etymology is obscure (Edgerton JAOS. 31. 124 f. finds 87 unclassifiables in the Vedic alone), and taking account of the fact that the semantic divisions used above were comparatively vague ones, and that therefore each could be still further subdivided into more definite categories, it becomes evident that I. E. *-ko-*

also was in the beginning a meaningless suffix, and that to a large extent it continued meaningless. And the processes which caused such meaning as there was, were the same here as elsewhere: gradual infusion into the suffix of semantic elements which belonged either to the primitive or to the situation without being attached to any phonetic unit, and a continuance of the process of conglutination, by means of which part of the primitive coalescing with the suffix formed a longer suffix in which elements of meaning which were in the beginning accidental were crystallized and made ready for new analogical formations.

If, then, suffixes like *-mo-* and *-ko-*, which themselves are probably partly conglutinations of final stem-consonants with simple vocalic suffixes, are nevertheless practically meaningless, how much more will the same thing be true of the suffixes composed of only a single sound, which have not had the advantage of conglutination to crystallize their meaning? Suffixes like *-o-*, *-ā-*, *-i-*, *-u-*, *-g-*, *-k-*, *-t-*, should have even less of a tendency to develop definite uses. Of these I shall omit the consonantal ones because it is not clear how far they were merely the reduced grade of the same suffix plus vowel, as *-k-* e. g. might be merely the unaccented form of *-ko-* in some words. Of some of the vocalic suffixes, however, I shall give examples to show their wideness of application, giving only an example or two from each category, and practically confining myself to those languages which, like Sanskrit and Greek, are structurally transparent.

Of these I shall take *-o-* and *-ā-* together, as having much the same sphere of usage and standing in intimate relation to each other as being complementaries in gender. I mention the following semantic categories: primary adjectives, as Skt. *çōṣa-s* 'making dry', Gr. *αῖος* Lith. *sausas* 'dry', with active verbal force, e. g. Skt. *tārā-s*¹ Gr. *τορός* 'penetrating, loud'; substantival agent nouns, as Skt. *çāsā-s*¹ 'commander', Gr. *αἰδός* 'singer'; verbal abstracts, as Skt. *srāva-s* Gr. *ῥόος* 'flow', Gr. *ἔργον* O. Icel. *verk* N. 'work', Skt. *bhujā* 'winding', Gr.

¹That I. E. *-o-* should be accented in agent nouns as opposed to action nouns was no doubt not an original distinction and need not affect us here.

φύγή Lat. *fuga* 'flight'; instrument nouns, as Skr. *jāmbha-s* Gr. γόμφος O. Blg. *zqbz* 'instrument for crushing, tooth': Skt. *jambháyati* 'he crushes', Skt. *yugá-m* Gr. ζυγόν Lat. *jugum* 'yoke': Lat. *jungo* 'join', Gr. τροφή 'means of support': τρέφω, O. H. G. *bāra* 'bier': *beran* 'carry'; place names in Skt. *vēṣa-s* Gr. οἶκος 'dwelling, house': Skt. *viśāti* 'he enters', Gr. νομή 'pasture': νέμω, O. H. G. *sāza* M. H. G. *sāze* 'seat, dwelling': Goth. *sitan*; collectives, as Skt. *bhrātrá-m* 'brotherhood': *bhrātar-* 'brother', Gr. ἄστρον 'constellation': ἀστήρ 'star', Skt. *tārā* 'constellation': *tār-as* 'stars', Gr. φράτερ 'brotherhood': φράτηρ; adjectival abstracts, as Skt. *satyá-m* 'truth', Gr. μέλιχον 'mildness', Lat. *justum* 'justice', Skt. *jaraṇā* 'decrepitude', O. H. G. *wāra* 'truth'; denominative adjectives and substantives in which it apparently designates appurtenance, as Skt. *pāuṣṇá-s* 'belonging to Pūshan', Skt. *udrá-s* Gr. ὕδρος 'water-animal': ὕδωρ 'water', Gr. πέλεκκον < *πελεκυον 'ax-handle': πέλεκυς 'ax', O. Blg. *srěda* 'middle' ('region of heart'): Gr. κῆρ[δ] 'heart'; descent or origin in Skt. *āṅgirasá-s* 'of the Angiras family', *mānuṣa-s* 'descendant of Manus', Gr. χέλλων 'tortoise-shell': χέλυς 'tortoise', Lat. *pēda* 'food-step': *pēd-* 'foot'; material, as Skt. *āyasá-s* 'of metal': *āyas*, *aravā-s* 'made of the wood of the *aratu-*'; possession, as Skt. *paruṣá-s* 'knotty': *páruṣ-* 'knot', *parṣvā-m* 'side': *párṣu-ṣ* 'rib', O. Blg. *noga* 'foot': Gr. ὄνξ 'claw, nail'; characteristic or similarity in Skt. *hāstina-s* 'big as an elephant': *hastin-* 'elephant', O. H. G. *ōri* (stem *ōrja-*) 'ear-like opening': Lith. *ausì-s* 'ear', Gr. γαλέη < *γαλεῖα 'weasel': Skt. *giri-ṣ* 'mouse'. For *-ā-* must be added the extremely common function of designating natural feminine gender, e. g. Skt. *ācvā* Lat. *equa* 'mare': Skt. M. *ācvā-s*, etc., Gr. ἐκυρά Lat. *socera* Goth. *swaihrō* 'mother-in-law': Gr. M. ἐκυρός. Both suffixes, moreover, are used with very great freedom to form words which in no way differ semantically from their primitives, e. g. Skt. *phalgvā-s* 'tiny' = *phalgú-ṣ*, *hārīta-s* 'fallow' = *harit-*, *yūṣa-s* *yūṣa-m* 'broth' = *yūṣ-*, Gr. ἰός < *ἰωφο-s 'arrow' = Skt. *iṣu-ṣ*, Lat. *terminu-s* 'boundary' = *termen*, Skt. *kṣīpā* 'finger' = *kṣīp-*, *druhá* 'harm' = *drúh-*, Gr. ψίχῃ 'crumb' = ψίξ. Adding to these again the unclassifiables, which e. g. in the Lithuanian are so numerous that Leskien Bild. d. Nom. 9, 49 does not try to give a classification according to meaning at all, we

must come to the conclusion that *-o-* and *-ā-* also were originally meaningless suffixes, and that their use in the very beginning spread in precisely the same way as Leskien shows it to do in the Lithuanian, namely by imitation of the complete form of older words ending in these vowels rather than because of a feeling for any meaning of these suffixes. How attenuated that must have been is furthermore shown by their occurrence in various forms of the verb, being used e. g. to form presents as well as aorists, and the absurdity of loading on the thematic vowel a conscious perception of nearly every meaning of which any suffix, verbal or nominal, is capable, has no doubt been of great influence in causing the general acceptance of the idea first announced by Streitberg in his essay "Die Entstehung der Dehnstufe" (IF. 3. 305 ff.), that *-o-* was not a suffix in the ordinary sense, but merely the final of certain dissyllabic roots. The same idea is suggested at least partially for *-ā-* by Brugmann Gr. 2. 1². 148, and more definitely by Hirt Handb.² 343, and since the sphere of usage of the latter is so strikingly similar to *-o-*, similarity of origin is the conclusion to which we are inevitably led.

Approximately the same conditions hold good for *-i-*, except that it never was a suffix of such great productivity, that a far larger per cent. of words formed with it shows no suffixal meaning at all, and therefore there was a smaller number of apparent semantic categories, so that it gives a glimpse of a state of affairs closer to its ultimate origin. It forms primary adjectives like Skt. *bhīmi-ṣ* 'lively': *bhramati* 'he wanders, flutters', Gr. *τρόφισ* 'well-fed, stout': *τρέφω*, with active verbal force e. g. Skt. *ba-bhri-ṣ* 'carrying': *bhāraṭi* 'he carries'; substantival agent nouns, as Skt. *sādi-ṣ* 'sitter, rider': *sad-* 'sit', Gr. *πόχης* 'runner, messenger': *τρέχω*; verbal abstracts, as Skt. *vani-ṣ* 'desire': *vānati*, Gr. *δῆψ* 'combat': *δέπω*, Lith. *kritis* 'fall': *krintù kristi*; instrument nouns, as Skt. *va-vri-ṣ* 'cover, garment': *vr̥ṇōti* 'he covers', O. H. G. *scār* 'pair of scissors': *sceran* 'shear', O. Blg. *vodo-nosb* 'vessel for carrying water': *nesti* 'carry'; place names, as Skt. *āji-ṣ* 'race-course': *ājati* 'he drives', O. Blg. *vodo-točb* 'water-course, canal': *tešti* 'run, flow'. As a secondary suffix *-i-* comes very close to being one into which it is impossible even to read a meaning. As far as substantives derived from substantives

are concerned, they are all merely extensions of previously existing substantives with the same meaning, merely a transfer to the *i*-declension. Thus Skt. *nákti-ṣ* Lith. *naktis* 'night' = Skt. *nákt-* Gr. *νύξ -κτός* Lat. *nox -ctis* Goth. *nahts*, Skt. *dṛṣi-ṣ* 'sight' = *dṛṣ-*, *ḥuni-ṣ* 'dog' = *ḥvā*, Pruss. *sunis* 'dog' = Lith. *szũ*, Lat. *nāvis* 'ship' = Gr. *ναῦς*. That it is possible for such a meaningless secondary suffix to develop the semantic types that are otherwise so common, is shown by the Balto-Slavic. The Slavic forms by means of our suffix adjectival abstracts like *zelenь* 'greenness': *zelenъ* 'green', *toplь* 'warmth': *toplъ* 'warm', and collectives like *čedь* 'people': *čedo* 'child'. In the Lithuanian, moreover, we find the isolated *avižis* 'dragon-fly': *avižà* 'oats', in which *-i-* is a suffix of appurtenance, and *rankis* 'sign-board': *rankà* 'hand', in which it seems to designate either similarity or possession.

If now one who believes in the compositional origin of suffixes would argue that it is unfair to use as examples suffixes of such great productivity, in which gradual spread of meaning was to be expected, but that the unproductive suffixes would tell a different story, he could be answered in several ways. In the first place he lost sight of the fact that it is not only the bewildering variety of the usages of the individual suffixes that argues against the composition theory, but the fact that all the less vague and more concrete uses are demonstrably later developments. Then too it is important that while one or the other of these formatives may be more productive in a particular direction than others, yet on the whole the principal suffixal meanings are common to nearly all of the simpler ones which have not been limited by repeated conglutinations. To hold to the composition theory in spite of this, would mean to believe that an immense number of words with greatly varying phonetic aspects all meant the same thing and all remained alive and in such frequent use that they could be perpetuated in the suffixes. In the next place, even if we do find a suffix of narrow productivity which shows a unified meaning, that is by no means an objection against our theory; for if all words in a given formative are made after one and the same pattern, the chances are that its influence will work the same way on all of the derivatives, and in this way could be explained what the composition theory cannot

explain, namely why even such narrow unified groups should show meanings like action, agency, instrumentality, appurtenance, etc., instead of the vivid meanings we should expect from individual words at a time when so few compounds had been formed by them that there could not have been much branching out. This can be illustrated by the Skt. suffix *-vi-*, which has no counterpart in other languages, and the origin of which we can trace under our very eyes. It is most certain in two verbal adjectives: *jāgrvi-ṣ* 'waking': *jāgārti* 'wakes' and *dādhrvi-ṣ* 'sustaining': *dharati* 'sustains'. They were undoubtedly patterned after *dīdiv-i-ṣ* 'shining': *dīvyati* 'shines', in which the *v* belongs to the root but might be taken with the suffix *-i-*. The close association of the three words presupposed is shown not only by the suffix and by their belonging to the same type of verbal adjective, but also by their similarity of formation otherwise: the strong accented reduplication before the weak unaccented root. Of the other three words in *-vi-* mentioned by Whitney Skt. Gram. p. 452, *ghṛṣvi-ṣ* 'lively' is plainly an *i*-extension of *ghṛṣu-ṣ* with the same meaning, and *dhruvi-ṣ* 'firm' arose by transfer of *dhruvā-ṣ* 'firm' to the *i*-declension. After the latter, however, was patterned the opposite *jīr-vi-ṣ* 'worn out': *jīryati* 'grows old'. Cases of this kind are very far, then, from supporting the theory of composition, but do rather the opposite, and our suffix *-vi-* is particularly instructive because it shows how divergence of formation as well as meaning can be explained by origin from more than one word even in a formative whose productivity has not exceeded three or four words.

Just to show that the I. E. suffixes, even when their productivity is very limited, may yet display the same general types of usage as the more frequent ones, I will give examples of *-mi-* and *-dhro-*, which certainly are among the rarer ones. The former is found in two primary adjectives: Skt. *krúdhmi-ṣ* 'wrathful': *krúdhyaṭi* 'is angry' and Av. *dāmi-š* 'creating': Skt. *dādadhāti*. The latter is also an agent substantive, as may also be the Skt. feminine *bhūmi-ṣ* 'earth' (: *bhāvati*), originally 'the producer'? It forms verbal abstracts in Av. *staomi-š* 'song of praise': Skt. *stāūti* 'praises', Gr. *φήμεις* 'talk, report': *φημί*; an instrument noun doubtless in Skt. *raçmi-ṣ* 'reins', though it is doubtful whether it can be con-

nected with Lith. *riszù* 'bind'. In Goth. *haims* 'village' (: Gr. *κείμαι*?) it forms a place name, and the association of a similar sound as well as the connection of both being parts of the body caused the pair Goth. *arms* 'arm' and *barms* 'lap'. A larger congeneric group is composed of words meaning 'worm', of which I mention Skt. *kími-s* Lith. *kirmis*, Lat. *vermis* Goth. *waúrms* O. H. G. *wurm*, and Gr. *ελμς* 'intestinal-worm'. This is certainly a wide divergence of meaning for a suffix which covers less than a page in Brugmann's Grundriss.

I. E. *-dhro-* occurs in the primary adjectives Av. *maqzdra-* 'intelligent, wise' < **mendh-dhro-* or **mondh-dhro-*: Lith. *mandras* and Gr. *σκυθρός* 'angry' < **σκυσθρός*: *σκύζομαι*. It forms the substantival agent noun Gr. *μύλωθρον* 'miller': *μύλωθρον* 'mill'; verbal abstracts, as Gr. *λύθρον* 'defilement', *ὄλεθρος* 'ruin', Lat. *flābrum* 'blowing of the wind'; instrument nouns, as Gr. *κόρηθρον* 'broom': *κορέω* 'sweep', Lat. *crībrum* 'sieve': *cerno*; place names, as Gr. *βάθρον* 'pedestal, foundation': *βαίνω* 'walk, step', Lat. *dēlūbrum* 'place of purification': *dēluo*. As a secondary suffix it appears to designate appurtenance in Lat. *candēlābrum* 'candle-stick': *candēla* 'candle' and O. Blg. *noz-dri* 'nostrils': Skt. *nas-ā* 'nose' (Instr. Sing.).

Once more, then, the fact that the simpler suffixes show in the oldest strata of words formed with them no meanings except vague general ones like adjectival use, agency, action, quality, etc., and that different ones of these are not characteristic of different suffixes, but rather all of them show the same or similar combinations of meaning, points to the inevitable conclusion that these notions were in the beginning not at all connected with the suffixes themselves, but were rather due to the entire situation in which a word was placed, and only gradually did the suffix become their exponent. This becomes still clearer when we examine the primitive root-nouns, in which any analysis is of course impossible, in the sense that part of the meaning was attributed to the root and part to the ending; for there was no ending except a case-ending. And yet these root-nouns show the very same types of use as do nouns ending in stem-suffixes, i. e. those classified as primary, for a secondary formation necessarily presupposes at least one

suffix, which would put the same outside of the category of root-nouns. The latter are primary adjectives with passive force e. g. in Skt. *yúj-* 'yoked together', particularly in compounds like Skt. *pṛtanā́j-*, i. e. *pṛtanā-áj-* 'driven to battle', Gr. ἀπο-*ρρώξ* 'torn off'; with active force e. g. Skt. *vṛdh-* 'gladdening', *dṛç-* 'seeing', Gr. *πτώξ* -*κός* 'crouching, timid', or compounds like Skt. *vṛtra-hán-* 'slaying Vṛtra', Gr. *ψευσί-στος* 'hating lies'. We find them as substantival agent-nouns in Skt. *rāj-* Lat. *rēx* *rēg-is* Ir. *rī rīg* 'ruler': Lat. *regere*, Skt. *dā-* 'giver', Gr. *κλώψ* -*πός* 'thief': *κλέπτω* 'steal', Lat. *dux -cis* 'leader': *dūco*; as verbal abstracts in Skt. *drúh-* 'offence, injury'=Av. *drūj-*, Gr. *στυγ* -*γός* 'hatred', Lat. *prex prec-is* 'prayer'; as instrument nouns in Av. *dər²z-* 'bond, fetter', and Gr. *δράξ* *δρα-κός* 'hand': *δράσσομαι* 'grasp', also Lat. *frūx frūg-is* 'fruit': *fruor* 'enjoy myself', Gr. *χέρ-νυψ* 'water for washing the hands': *νίπτω* 'wash'; as place names in Skt. *viç-* 'settlement': *viçáti* 'settles', *kṣā-s* 'dwelling-place': *kṣēti* 'he dwells', Osc. *trībúm* F., Acc. Sing., and *tribud* Abl. Sing. 'house': Umbr. *trebeit* 'versatur'. It is furthermore interesting to note that the process of attraction of congeneric words, which has so often caused suffixes to appear as the exponents of concrete categories, was at work here also, though no single part of the word could be singled out as being the carrier of this common semantic element. I mention two such groups which have assumed such proportions that accidental similarity of formation is out of the question. To I. E. times belongs a large list of words designating parts of the body: **pēd- *pōd-* 'foot'=Skt. *pāt pad-ás*, Gr. Dor. *πώς* *ποδ-ός*, Lat. *pēs ped-is*; **nās- *nas-* 'nose'=Skt. Du. *nās-ā*, O. Eng. *nos-u nas-u*, Lat. Acc. Sing. *nār-em*; **ōus- *us-* 'ear'=Av. *uš-i* and O. Blg. *uš-i* Neutr. Du. Lith. *aus-ì* Fem. Du., Gr. *ὠς* < **ō[u]s*; similarly various words for the two eyes: Skt. *akṣ-ī* Av. *aš-i* N., O. Blg. *oč-i* N. and Lith. *ak-ì* F., Gr. *δοσε* < **okṣṣe*; two groups meaning 'heart': Gr. *κῆρ* < **κηρδ*, Lat. *cor cord-is*, Lith. Gen. Pl. *szird-ū*, and Skt. *hṛd-*, Av. Instr. *zər²d-ā*; I. E. **bhrū- *bhruu-*=Skt. *bhrū-ṣ* Gr. *ὄφρῦ-s* O. Eng. *brú* 'eye-brow'; **ō[u]s* 'mouth'=Skt. *ās-*, Av. *āh-*, Lat. *ōs ōr-is*; **gḥer-* 'hand'=Arm. Nom. Pl. *jer-ē*, Gr. Dat. *χερ-ί*, *χερ-σί*. To these was added in later times the Av. Du. F. *suši* 'lungs', Gr. *θρίξ* *τριχός* 'hair', and the above mentioned

Gr. *δράξ* 'hand'. It is evident that these words were not all associated to the same intimate degree, e. g. the words for eye-brow had perhaps have rather been left out, while on the other hand the relation of the duals for eye, ear, and nose is so intimate as to make mutual influence certain.

A second congeneric group consisting of names of animals also started in I. E. times, but became particularly productive in the Greek. Among the older words are I. E. **g^hōu-* **g^hou-* 'ox, cow' = Skt. *gāu-s*, Av. *gāu-š*, Gr. *βοῦς*, Lat. *bōs*, Ir. *bō* 'cow', O. H. G. *chuo* 'cow'; **sū-s* 'pig, sow' = Gr. *ῥῆς*, Lat. *sūs*, O. H. G. *sū*; Gr. *ἰχθῦς* 'fish': Lith. Gen. Pl. *žuv-ũ*; **mūs-* 'mouse' = Skt. *mūś-*, Gr. *μῦς*, Lat. *mūs*, O. H. G. *mūs*; Gr. *θῆρ* 'animal': Lith. *žvėrīs* O. Blg. *zvěrb* 'wild animal' and Lat. *ferus* 'wild'; Gr. *χῆρ χηρ-ός* Lat. *ēr ēr-is* 'hedge-hog'. Greek shows the following new words of this group: *κῖς κί-ός* 'weevil', *δόρξ -κός* 'gazelle': *δέρκομαι, κρέξ* 'a kind of bird': *κρέκω, τρώξ -γός* 'worm': *τρώγω* 'gnaw', *πτώξ -κός* 'hare': *πτώσσω* 'crouch', *σκνίψ* 'a kind of ant': *σκνίπτω* 'pinch', *σκόψ -πός* 'owl': *σκέπτομαι* 'look', *θώς* 'jackal': *θέω* 'run'. In Latin the similar *strix strig-is* 'screech-owl': Gr. *τρίξω* 'screech'. Of the new Greek words it is to be noticed that all except *κῖς* are agent nouns related to existing Greek verbs, and it is therefore possible that they were patterned after one or more of these rather than after the I. E. names of animals. However that may be, they illustrate the power of association in congeneric words without suffix in exactly the same way.

In Gothic we no doubt have a solitary case of congeneric attraction in the Gen. Sing. *alhs* of *alhs* 'temple', which was due to the influence of the older *baúrgs*, Gen. *baúrgs*, 'castle'.

From the psychological point of view every unanalyzable or rather every unanalyzed word of every period of the language is on the same basis as a root-word; for without such analysis into primitive stem and suffix it is impossible to attribute to the latter any meaning whatsoever, no matter what may have been true of the origin of the word. This applies in the first place to words whose suffixes have disappeared through phonetic processes, as have *-o-* and *-i-* in many forms of the Germanic languages. It is clearly impossible to burden I. E. *-o-* with the notion of instrumentality in Goth. *juk* O. H. G. *joh* Eng. *yoke*: Lat. *jungo* 'join', or *-i-* with the notion of

action in German *Schlag* 'blow', or the former with being considered as a suffix forming names of animals in Goth. *wulfs* O. H. G. *wolf* Engl. *wolf*=Skt. *vṛk-a-s*, when the speakers of these languages were blissfully ignorant of the past existence of these vowels. The same impossibility of analysis is present whenever the derivation of a word is forgotten or not attended to, and here we may call attention to the fact that the demonstrably oldest stratum of I. E. words, which must to a large degree have been the patterns for the younger ones, very largely consists of words whose derivation cannot now be traced and probably was unknown then, so that the feeling of the suffix expressing a relation to the root-part of the word is out of the question. Cf. such words as the above mentioned I. E. **ul̥kʷo-s* 'wolf', **ou̯i-s* Skt. *ávi-s* 'sheep', **pékʷ* Skt. *páçu* 'animal', **bhāgo-s* Lat. *fāgus* 'beech', **bhāḡhu-s* Gr. *πῆχυς* 'elbow', **sʷesor* Skt. *svásar-* 'sister', **ōmo-s* Skt. *āmá-s* 'raw'. These words were not at all interpreted differently from the extremely numerous words which became obscure as to derivation through the loss of the primitive or such phonetic or semantic changes as prevented recognition of the primitive, even when the etymology may be clear to the linguist, such words as German *Acker* Engl. *acre*: Lat. *ago*, or Germ. *Ross* Engl. *horse*: Lat. *curro* 'run'. Yet all these unanalyzable words, just as the original root-nouns, can be assigned to similar categories as those with clear etymology; for every word logically must belong to one or more such categories.

In view, then, of these facts we must conclude that it is rash in every instance to connect with the suffix the idea of these general categories in words which are clear etymologically; for if Gr. *βοῦς* can designate an animal without formal characterization of that fact, it is rash to conclude that in *λύκ-o-s* 'wolf' the notion of being an animal was connected with its suffix, unless there are very distinct indications of it in a tendency to confine new words to names of animals or at least to make them noticeably preponderant.

Similarly the fact that Gr. *στυγῆ* 'hatred' and Lat. *prex* 'prayer' are verbal abstracts though not ending in a suffix, prevents us from assuming that words like Gr. *φύγη* Lat. *fuga* 'flight' or Skt. *nṛt-i-s* 'dance' were in the earliest types

analyzed so as to connect the notion of action with the suffix. To do so in case of the simple vocalic suffixes was all the more difficult because from I. E. times onward the oblique cases had so often suffered contraction with the inflectional endings that the only psychic attitude possible to such a combination was the feeling that it was in its entirety merely a case ending, a fact amply proved by the division by the Latin grammarians of their nouns into five declensions according to the different stem-suffixes, not in the least thinking that the combination of the latter with the case-endings should be analyzed into two parts. The process culminating in the modern Germanic languages, in which many original stem-suffixes like the *-en* of the German weak declension are now felt purely and simply as case-endings, had begun in the Latin and no doubt in the Indo-European, so that we may well doubt whether these simple vocalic suffixes ever were consciously felt as being the exponent of any of these ideas with which grammatical analysis has burdened them. Having gone this far, we can now go one step further and maintain that also the other suffixes which do not lose their identity by contractions, as e. g. *-mo-*, *-ro-*, *-ko-*, *-bho-*, *-nu-*, *-ti-*, *-en-on-*, *-es-* *-os-*, which show the same perpetually recurring types of usage, were not originally associated with them, but they developed such connection by long processes of association and discrimination.

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(To be Continued.)